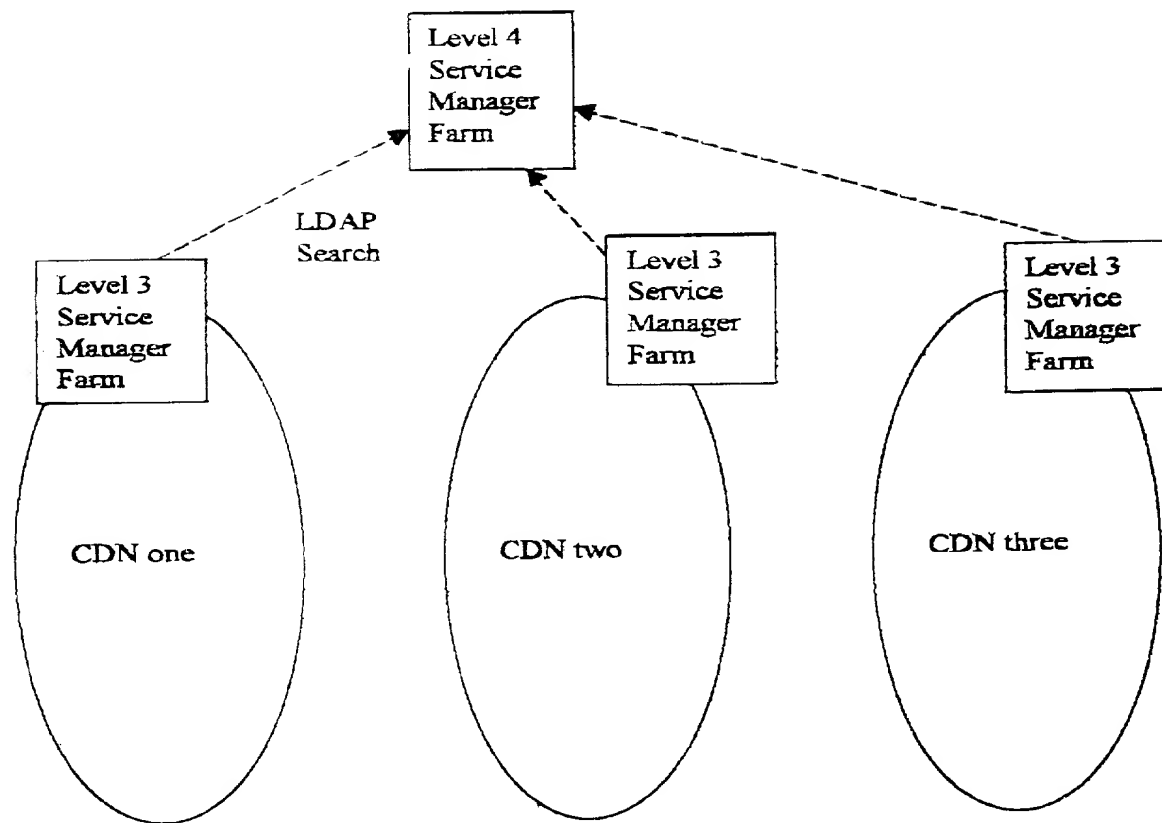


Fig 1 Content Peering for Multiple CDN Networks



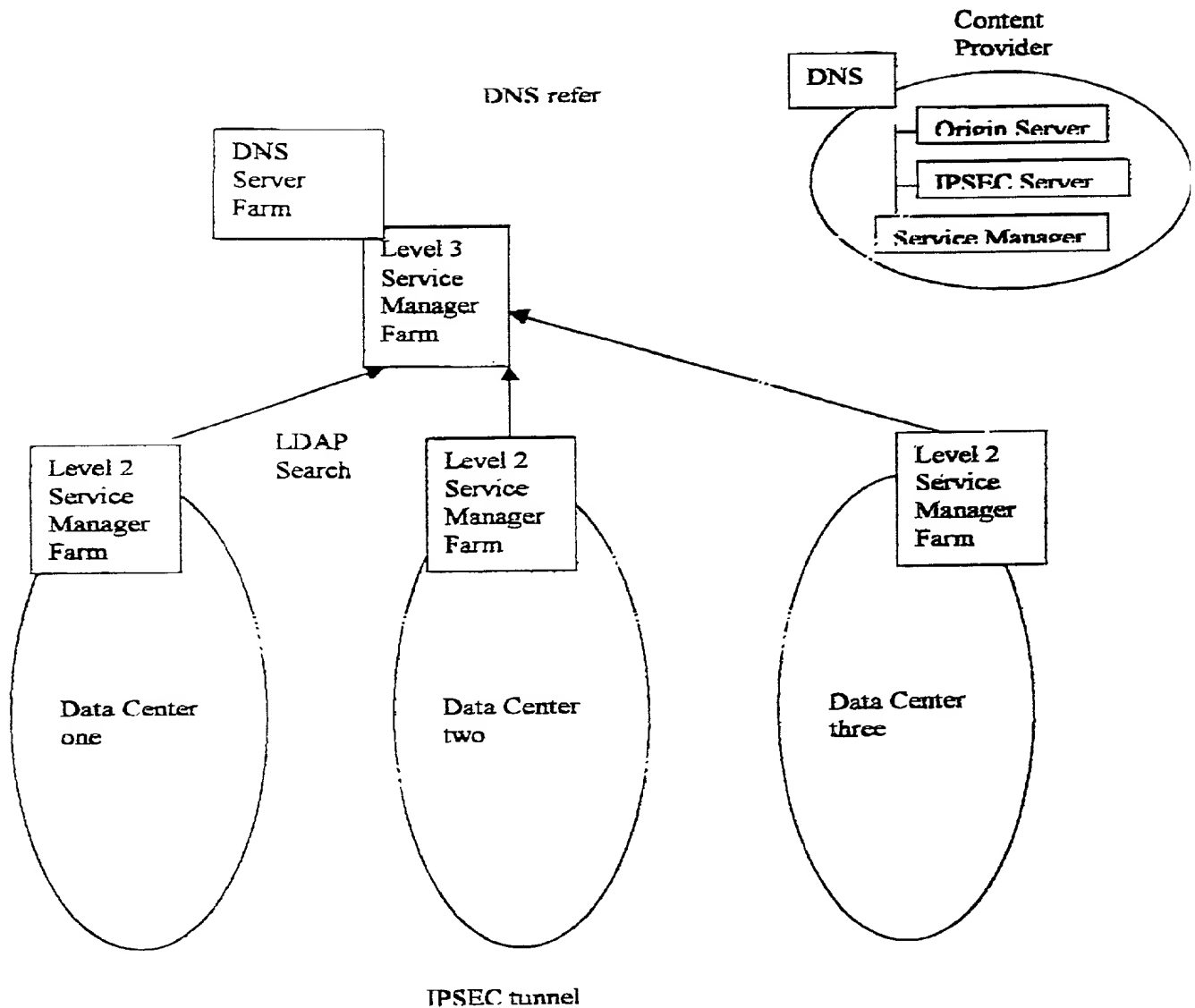
Although it depends on directory information forwarding policy, typically Level 4 Service Manager stores the content location information of CDN one, CDN two and CDN three.

Level 3 Service Manager of CDN one stores only the content location information of CDN one.

Level 3 Service Manager of CDN two stores only the content location information of CDN two.

Level 3 Service Manager of CDN three stores only the content location information of CDN three.

Fig 2a Integrated Service Network of Multiple Data Centers



Although it depends on directory information forwarding policy, typically Level 3 Service Manager stores the content location information of Data Center one, Data Center two and Data Center three. Level 2 Service Manager of Data Center one stores only the content location information of Data Center one. Level 2 Service Manager of Data Center two stores only the content location information of Data Center two. Level 2 Service Manager of Data Center three stores only the content location information of Data Center three. Data going across Data Center can go through IPSEC tunnel to guarantee privacy and security or even form a VPN among Data Centers.



Fig 3 Service Manager and Caching Proxy Server Farm in a Data Center

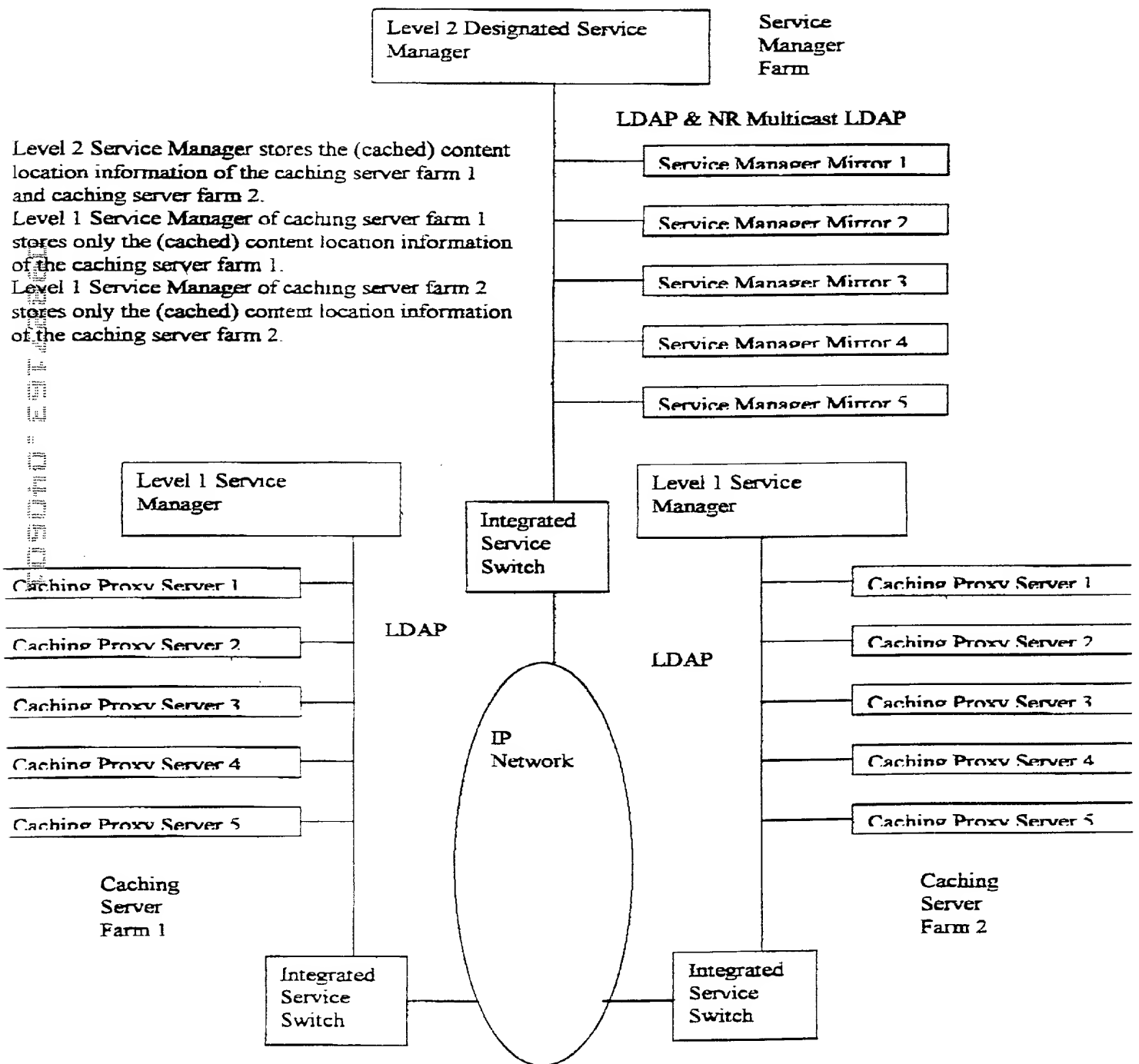


Fig 4 Directory Information Multicast Update in Service Manager Farm

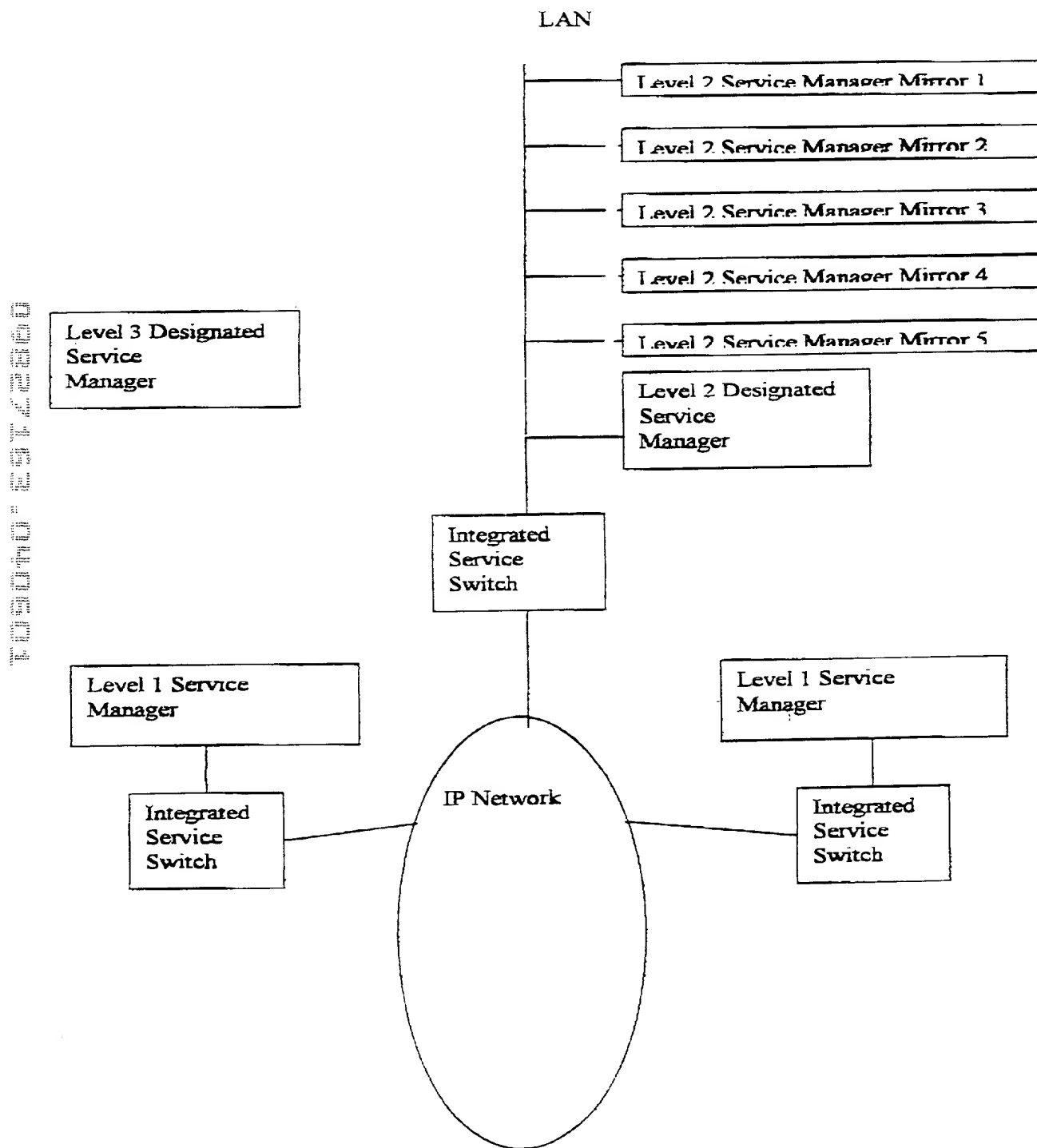
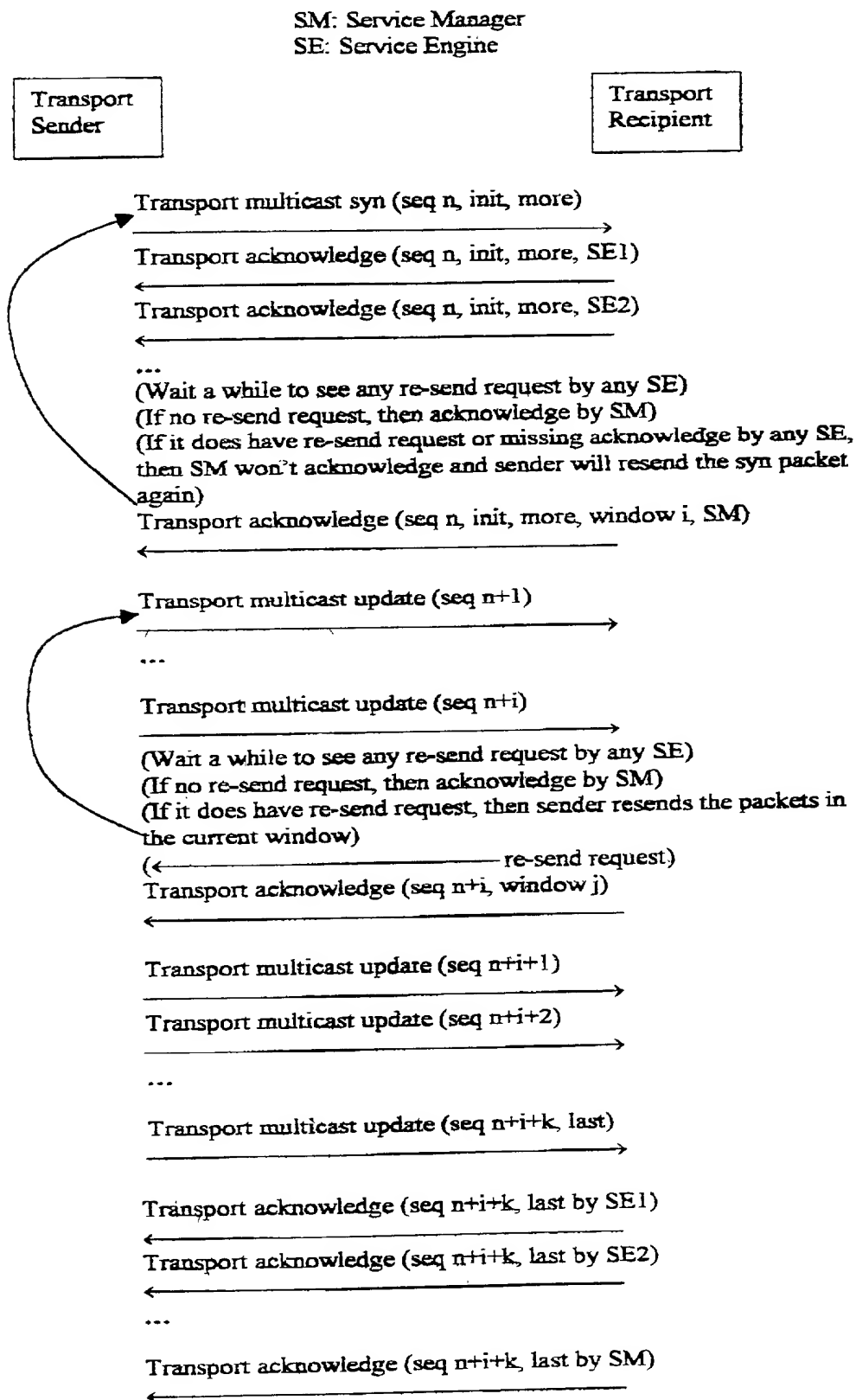


Fig 5 Reliable Multicast Transport Protocol Sequence



Note that acknowledge and re-send request are both multicast packets.

Fig 5 Integrated Service LAN

SE: Service Engine

ISS: Integrated Service Switch

SM: Service Manager (Level 1)

BSM: Backup Service Manager (Level 1)

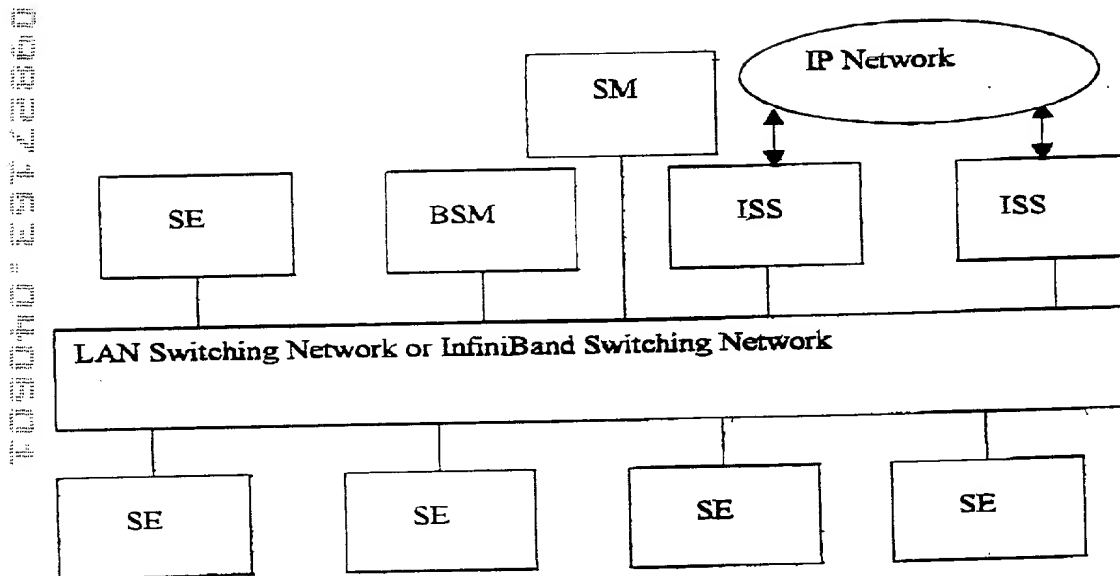
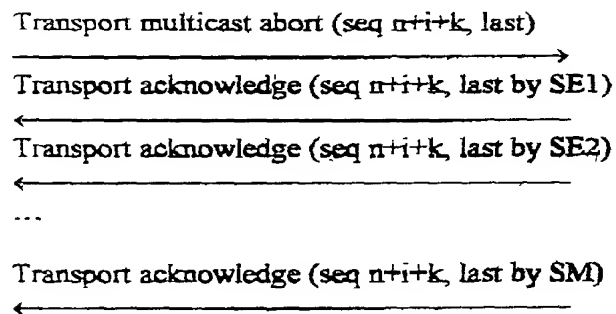


Fig 6 Transport multicast abort operation sequence



This abort operation allow sender to abort the multicast transport operation for whatever reason, it can send a Transport multicast abort message and should acknowledge by all others and SM. SM will acknowledge until all others have acknowledged.



Fig 7 Reliable Multicast Directory Update Protocol Sequence

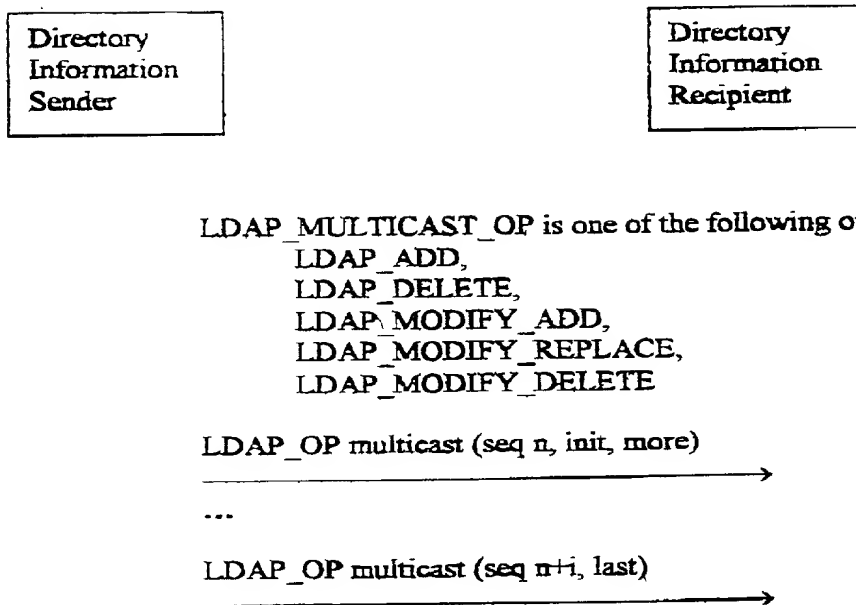


Fig 8 Reliable Multicast Management Protocol Sequence



SNMP\_MULTICAST\_OP is one of the following operations:  
SNMP\_GET,  
SNMP\_GETNEXT,  
SNMP\_SET

SNMP\_MULTICAST\_OP multicast (seq n, init, no more)

